

Erica kirstenii, a new rock-loving species from South Africa.

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There are a number of species of *Erica* in the Cape region which can be allied to each other on the basis of their woody, often gnarled growth, medium-sized urceolate flowers with showy, coloured bract, bracteoles and calyx edged with short to long plumose hairs which may also be gland-tipped, and their included anthers which often have large showy appendages. All grow at high altitude on the inland mountains of the Western Cape. Some of the species are *E. goatcheriana* and its various described varieties, *E. monsoniana*, *E. modesta*, *E. oresigena*, *E. schumannii*, *E. lanipes*, *E. dianthifolia*, this despite their placing in different sections within the genus in *Flora Capensis* (1906). Within this set of species there are clear indications that some need further investigation to assess their infraspecific variation and the possible erection of new species. There are also several undescribed species within the group, one of which is described here.

E. kirstenii is restricted to the Klein Swartberg range of mountains which occurs just north of the town of Ladismith. The species was collected in the first botanical exploration of these high mountains by a team of amateur botanists in December 1928. Subsequently it has been collected a number of times and identified as "near" *E. oresigena* var. *mollipila*.

The habitat is rocky places, either cliffs faces, rock ledges or in cracks of large rock outcrops. No plants have been seen by us in open ground. Esterhuysen noted that plants on Toverkop occurred in rock crevices and were common on the northern side just below the summit. In these situations the shrublets are small and gnarled, sometimes slightly spreading along the crevices or over the rocks, but may become quite woody and erect in favourable places. Most localities occur at high altitude (6,500–7,000 ft; c. 2,000m) with the type locality and others on the southern ridge of Seweweekspoortberg probably being low outliers at 5,000 ft (1,700 m). The type collection was made on a joint trip with Thys de Villiers of Caledon.

We have great pleasure in naming this attractive and interesting species after Gerhard Kirsten, amateur ericologist without equal, former sports journalist and lover of nature, who has made a special effort to study



Fig. 1. *Erica kirstenii*.
Close-up of a flowering branch.



Fig. 2. Plant of *Erica kirstenii*
in natural habitat.

and collect as many species of *Erica* in the Cape Floral Kingdom as he could find (see p. 4, this issue). Over the past 30 years he has built up a remarkable knowledge of the genus as it occurs in nature which is reflected in the publication of the superb book *Ericas of South Africa* together with Dolf Schumann.

The name of this species is very appropriate for several reasons. Gerhard's family background lies in the Ladismith District where he was born in 1931, spending 17 years there before going on to Stellenbosch University and then to Cape Town where he worked for *Die Burger*, the local Afrikaans language newspaper. His mother was born on the farm Weltevrede at the southern base of Seweweekspoortberg with the nearby Weltevrede River draining the slopes where the type collection was made. Gerhard himself collected the species as a *species incertae* at this locality in 1972.

Another reason is the close botanical relationship between *E. kirstenii* and *E. schumannii* (see above and *Yearbook 1998*: 32–38) and the co-authorship

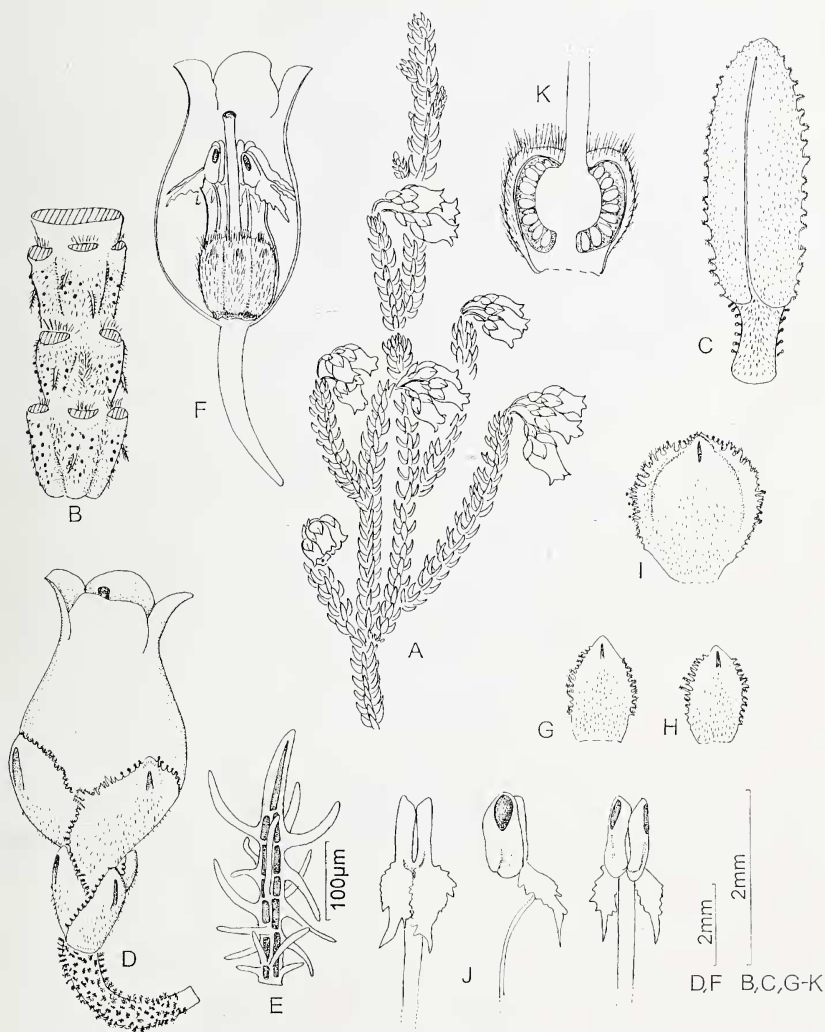


Fig. 3. *Erica kirstenii*. A, flowering branch, natural size; B, stem; C, leaf; D, flower; E, plumose hair from pedicel; F, flower, opened from the side; G, bract; H, bracteole; I, sepal; J, stamen, back, side and front views; K, ovary, cut in half. All drawn from the type collection *Oliver* 11330. © Inge Oliver.

of their wonderful book on ericas. Previously they brought in a very remarkable small-flowered new species which we named *E. amicorum* (= of the friends).

E. kirstenii is allied to the recently described *E. schumannii* (compare Fig. 3 here with the figure in *Yearbook 1998*: 32). The latter species has a long point to the leaf, bright pink flowers, longer, narrow, more acute anthers with white appendages, the ovary not emarginate and the placenta a naked flap-like structure. *E. schumannii* also grows in rocky places but forms almost flat mat-like plants spreading over the rocks.

The new species is also related to the taxon currently known as *E. oresigena* var. *mollipila* which occurs in a very disjunct distribution range in the Cederberg and then in the Klein Swartberg. It has noticeably narrower and longer sepals and the plumose hairs on the plant are longer and crisped giving the plant a woolly appearance. The corolla lobes are also much longer and more spreading. Both species grow on Seweweekspoortberg, but the latter is found in coarse, sandy soil among short, restiad-dominated vegetation and not in rock crevices.

One special feature of this species is the faint reddish tinge to the white flowers. This is caused by the large, bright red appendages to the anthers seen through the translucent yet rather hard corolla. This feature is not often seen in the genus.

Erica kirstenii E. G. H. Oliv., sp. nov.

Frutex lignosus parvus compactus prostratus vel erectus usque ad 300 mm, folia 3nata dentibus plumosis, bractea bracteolisque calyxque eburnea brevis plumosociliata, omnes ovata ad late ovata, corolla urceolata alba translucida glabra, antherae inclusae appendicibus magnis rubris, ovarium emarginatum, pubescente, stylum inclusum, stigma subsimplex, testa reticulata parietibus anticlinalibus undulatis crassis. Fig. 3.

TYPE: SOUTH AFRICA, Western Cape, 3321AD, Ladismith District, Seweweekspoortberg, ridge running south from the peak, 1700 m, 6 September 1999, E. G. H. Oliver & I. M. Oliver 11330 (NBG, holotype; BM, BOL, K, MO, NY, P, PRE).

Shrublet compact woody 10–25cm tall or very gnarled and much smaller in very exposed habitats. **Branches** numerous main branches 10–20mm long, rarely 40–80mm, mostly terminating in an inflorescence, occasionally continuing vegetative growth, secondary branches only from occasional nodes, 10–15(–30)mm long, terminating in an inflorescence; internodes very short \pm 1mm, with slight infrafoliar ridges, all covered with short retrorse simple hairs and a few sessile to shortly stalked red or orange-brown glands, also very occasionally longer plumose hairs admixed.

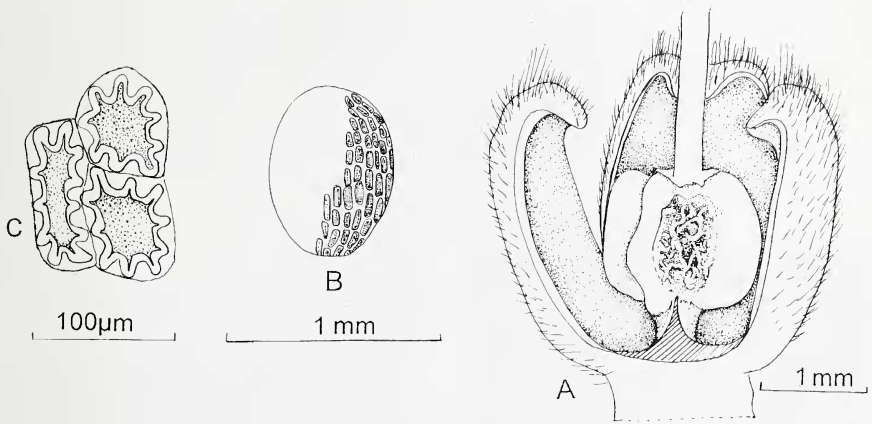


Fig. 4. *Erica kirstenii*. Fruit details; A, capsule with one valve removed; B, seed; C, testa cells. Drawn from *Oliver 11330*.

Leaves 3-nate, erect imbricate, 3.0–4.0 × 1 mm, narrowly elliptic, rounded abaxially flattened adaxially, margins acute with short plumose teeth, in younger teeth sometimes ending in small, pale orange to dark red glands, finely puberulous, dull green to slightly glaucous; petiole appressed, 1 mm long, white, shortly ciliate with small dark stalked glands. **Inflorescence:** flowers 3-nate in 1 whorl at ends of main or secondary branches; pedicel ± 3 mm long, red, covered with white plumose hairs ± 300 μm long; bract partially recalcrescent in position two-thirds up pedicel, 2.5 × 1.5 mm, ovate, white tinged cream, finely puberulous mainly towards the base, ciliate with plumose hairs (sometimes gland-tipped) in apical $\frac{3}{4}$, very shortly narrowly sulcate, the apex greenish; bracteoles 2 placed just above the bract, 2.0 × 1.2 mm, otherwise like the bract. **Calyx** 4-partite; lobes appressed to corolla, 3.5 × 3.0 mm, broadly ovate, white tinged cream towards apex, finely puberulous in lower half, margins shortly and irregularly toothed, teeth plumose with or without a gland-tip, sulcus ± 0.6 mm long narrow. **Corolla** 4-lobed, 7–8 × 4 mm, urceolate, glabrous, hard textured, white, semi translucent with red anther appendages giving red tinge; lobes 2.0 × 1.5 mm, rounded to subacute, slightly recurved, margin entire but slightly erose at base. **Stamens** 8, included, free; filaments 3 mm long, linear oblong, slightly flexed below anther otherwise straight, glabrous; anthers bipartite oblong, appendiculate; thecae erect appressed, 1.0 × 0.5 mm, oblong, obtuse, brown, appendages ± 1.0 × 0.5 mm, broad, subpendulous, variously toothed, red to red-brown; pore 0.4 mm long; pollen in tetrads. **Ovary** 4-locular, 1.5 × 1.5 mm, ellipsoid, emarginate, green, densely hairy, with red nectaries around the base; ovules 60 per locule, spreading from a complete placenta; style 3 mm long straight, greenish; stigma included, subsimple truncate, purple. **Fruit** a dehiscent capsule, valves hard textured, splitting nearly to

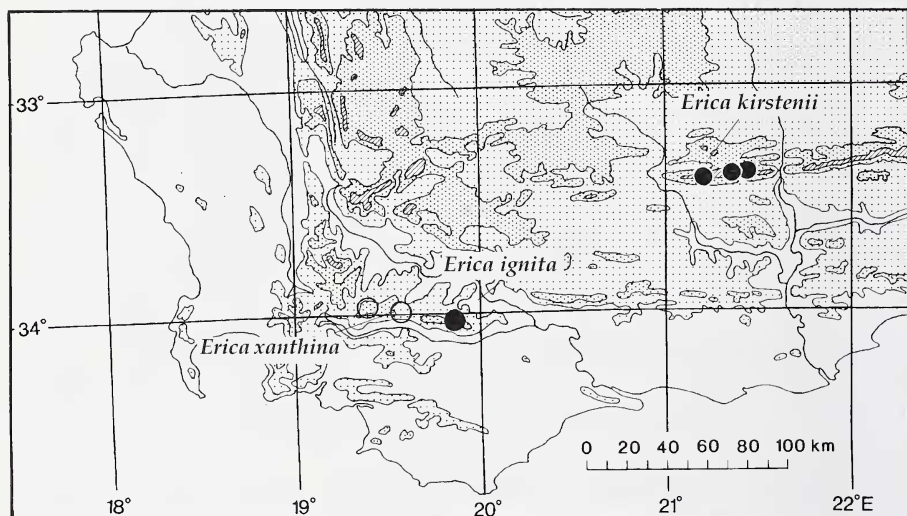


Fig. 5. The known distribution of *Erica kirstenii*, *Erica ignita* and *Erica xanthina* in the Western Cape, South Africa.

the base, opening to only 30°, septa only on the columella; seeds $\pm 0.8 \times 0.6$ mm, ellipsoid, dark brown, reticulate, testa with thick undulated anticlinal walls, minutely pitted. Figures 3 and 4.

PARATYPES: WESTERN CAPE – 3321: (-AC), Ladismith, Toverkop, 7000 ft, 5 September 1947, *Esterhuysen* 13935 (**BOL**); *ibid.*, 6500 ft, 16 December 1956, *Esterhuysen* 26763 (**BOL**); *ibid.*, 2 September 1973, *Esterhuysen* 33227 (**BOL, NBG, PRE**); (-AD), Ladismith, Seven Weeks Poort (Seweweekspoort) Mtn, 5000 ft, 12 October 1955, *Esterhuysen* 24776 (**BOL, K**); *ibid.*, 5000 ft, 23 September 1972, *Kirsten* 321 (**NBG**); *ibid.*, 5200 ft, 25 September 1998, *Oliver* 11150 (**NBG**); *ibid.*, 6000-7000 ft, December 1928, *Primos* 21 (**BOL, PRE**); *ibid.*, without date, *Stokoe* 7878 (**BOL**); Swartberg just east of Seweweekspoort, above Rocklands, 6300 ft, 14 October 1980, *W. Bond* 1784 (**NBG**); *ibid.*, 1950 m, 7 October 1993, *Oliver* 10369 (**NBG**). Locality not located: (-AC/AD); Klein Swartberg, N. side above Kouveld, 6500 ft, 22 May 1957, *Wurts* 1493 (**NBG**).